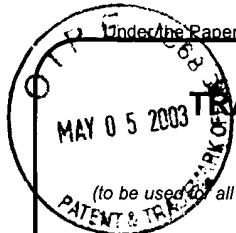


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TRANSMITTAL FORM

(to be used for all correspondence after initial filing)

Application Number	10/037,966
Filing Date	12/21/2001
First Named Inventor	Painter
Art Unit	2874
Examiner Name	Daniel E Valencia
Attorney Docket Number	CQC14NP

Total Number of Pages in This Submission

16

ENCLOSURES (Check all that apply)

<input checked="" type="checkbox"/> Fee Transmittal Form <input checked="" type="checkbox"/> Fee Attached <input checked="" type="checkbox"/> Amendment/Reply <input type="checkbox"/> After Final <input type="checkbox"/> Affidavits/declaration(s) <input checked="" type="checkbox"/> Extension of Time Request <input type="checkbox"/> Express Abandonment Request <input checked="" type="checkbox"/> Information Disclosure Statement <input type="checkbox"/> Certified Copy of Priority Document(s) <input type="checkbox"/> Response to Missing Parts/Incomplete Application <input type="checkbox"/> Response to Missing Parts under 37 CFR 1.52 or 1.53	<input type="checkbox"/> Drawing(s) <input type="checkbox"/> Licensing-related Papers <input type="checkbox"/> Petition <input type="checkbox"/> Petition to Convert to a Provisional Application <input checked="" type="checkbox"/> Power of Attorney, Revocation <input type="checkbox"/> Change of Correspondence Address <input type="checkbox"/> Terminal Disclaimer <input type="checkbox"/> Request for Refund <input type="checkbox"/> CD, Number of CD(s) _____	<input type="checkbox"/> After Allowance Communication to Group <input type="checkbox"/> Appeal Communication to Board of Appeals and Interferences <input type="checkbox"/> Appeal Communication to Group (Appeal Notice, Brief, Reply Brief) <input type="checkbox"/> Proprietary Information <input type="checkbox"/> Status Letter <input checked="" type="checkbox"/> Other Enclosure(s) (please identify below):
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Remarks

- Form PTO/SB/96 Statement under 37 CFR 3.73(b)
- copies of three (3) assignments
- postcard receipt

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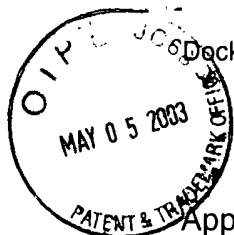
Firm or Individual	David S Alavi Reg No 40310
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Date	05/05/2003

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I hereby certify that this correspondence is being facsimile transmitted to the USPTO or deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Commissioner for Patents, Washington, DC 20231 on this date:			
Typed or printed		David S Alavi Reg No 40310	Express Mail 05/05/2003
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This collection of information is required by 37 CFR 1.5. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, Washington, DC 20231.**

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#5
Election
KJ
5/8/03

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants: Painter et al
Filed: 12/21/2001
App. No.: 10/037,966
For: Multi-layer dispersion-engineered
waveguides and resonators

Art Unit: 2874
Examiner: Daniel Valencia

ELECTION UNDER 37 CFR §§1.141 AND 1.146
INFORMATION DISCLOSURE STATEMENT UNDER 37 CFR §1.97

Commissioner for Patents
PO Box 1450
Alexandria, VA 22313-1450

05/05/2003

Sir:

In response to the Office Action dated 02/03/2003 (requirement for restriction), Applicant hereby elects Group I (Claims 1-74) for further examination. Applicant further elects Species 4 (Claims 12-15 and 16-22) for further examination if no generic claim is held allowable. Examiner has asserted that Claims 1 and 23 are generic. Applicant presumes that Claims 2-4, 24-27, 47-59, and 63, which are not recited in the restriction requirement as belonging to one of the enumerated species, shall remain under examination even if neither of Claims 1 and 23 is held allowable.

Examiner has stated (regarding Species 4) that: "A fourth embodiment represented by Claims 12 and 16-20 is drawn towards an optical device that can vary optical loss based on a control signal." Applicant respectfully points out that the Claims in question each recite a varying control signal resulting in "at least one of varying optical loss and varying modal-index". Applicant presumes that Claims 13-15 (dependent on Claim 12) and Claims 21-22 (dependent on Claim 20) shall be included in elected Species 4.

A one-month shortened statutory period for reply expired on 03/03/2003. Since 05/03/2003 was a Saturday, the present election is timely filed on Monday 05/05/2003 accompanied by a petition for a two-month extension-of-time and the required fee therefor.

An Information Disclosure Statement (IDS) is submitted herewith, along with photocopies of the references cited therein. The IDS has been submitted within the time limits set forth in 37 CFR §1.97(b) (i.e., before the mailing of a first Office Action on the merits).

Copies of a new power-of-attorney (Form PTO/SB/81), statement under 37 CFR §3.73(b) (Form PTO/SB/96), and three assignments are enclosed herewith. Please note the change of Customer Number and correspondence address.

Any questions regarding this election or IDS submission should be directed to the contact information set forth below. Applicant anticipates a first Office Action on the merits in due course.

Respectfully submitted,



David S. Alavi
3762 West 11th Ave.
#408
Eugene, OR 97402

Reg. No. 40,310
541-686-9462 voice
800-853-6150 fax
dalavi@northwestpatent.com

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PTO/SB/08A (10-01)

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Substitute for form 1449A/PTO

**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**

(use as many sheets as necessary)

Sheet 1 of 5

Complete if Known

Application Number	10/037,966
Filing Date	12/21/2001
First Named Inventor	Painter
Art Unit	2874
Examiner Name	Daniel E Valencia
Attorney Docket Number	CQC14NP

U.S. PATENT DOCUMENTS

Examiner Initials*	Cite No. ¹	Document Number	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number - Kind Code ² (if known)			
DV		US- 2002/0081055 A1	06-27-2002	Painter et al	
DV		US- 4,142,775	03-06-1979	Ramaswamy et al	
DV		US- 5,446,579	08-29-1995	Lomashevitch	
DV		US- 5,475,704	12-12-1995	Lomashevitch	
DV		US- 5,703,989	12-30-1997	Khan et al	
DV		US- 5,926,496	07-20-1999	Ho et al	
DV		US- 6,009,115	12-28-1999	Ho	
DV		US- 6,031,945	02-29-2000	You et al	
DV		US- 6,052,495	04-18-2000	Little et al	
DV		US- 6,356,694 B1	03-12-2002	Weber	
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FOREIGN PATENT DOCUMENTS

Examiner Initials*	Cite No. ¹	Foreign Patent Document	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T ⁶
		Country Code ³ - Number ⁴ - Kind Code ⁵ (if known)				

Examiner
SignatureDate
Considered

5/28/03

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¹ Applicant's unique citation designation number (optional). ² See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. ³ Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. ⁶ Applicant is to place a check mark here if English language Translation is attached.

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (use as many sheets as necessary)		Application Number	10/037.966
		Filing Date	12/21/2001
		First Named Inventor	Painter
		Group Art Unit	2874
		Examiner Name	Daniel E Valencia
		Attorney Docket Number	CQC14NP
Sheet	2	of	5

OTHER PRIOR ART -- NON PATENT LITERATURE DOCUMENTS			
Examiner Initials ¹	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published	T ²
DV		F. Agahi, B. Pezeshki, J. A. Kash, and D. W. Kisker, "Asymmetric Fabry-Perot modulator with a waveguide geometry", Electron. Lett. Vol. 32(3) 210 (1996)	
DV		Carl Arft, Diego R. Yankelovich, Andre Knoesen, Erji Mao, and James S. Harris Jr., "In-line fiber evanescent field electrooptic modulators", Journal of Nonlinear Optical Physics and Materials Vol. 9(1) 79 (2000)	
DV		C. I. H. Ashby, M. M. Bridges, A. A. Allerman, B. E. Hammons, "Origin of the time dependence of wet oxidation of AlGaAs", Appl. Phys. Lett. Vol. 75(1) 73 (1999)	
DV		W. G. Bi and C. W. Tu, "Bowing parameter of the band-gap energy of GaN _x As _{1-x} ", Appl. Phys. Lett. Vol. 70(12) 1608 (1997)	
DV		P. Chavarkar, L. Zhao, S. Keller, A. Fisher, C. Zheng, J. S. Speck, and U. K. Mishra, "Strain relaxation of In _x Ga _{1-x} As during lateral oxidation of underlying AlAs layers", Appl. Phys. Lett. Vol. 75(15) 2253 (1999)	
DV		E. I. Chen, N. Holonyak, Jr., and M. J. Ries, "Planar disorder- and native-oxide-defined photopumped AlAs-GaAs superlattice minidisk lasers", J. Appl. Phys. Vol. 79(11) 8204 (1996)	
DV		K. D. Choquette, K. M. Geib, C. I. H. Ashby, R. D. Twisten, O. Blum, H. Q. Hou, D. M. Follstaedt, B. E. Hammons, D. Mathes, and R. Hull, "Advances in selective wet oxidation of AlGaAs alloys", IEEE Journal of Selected Topics in Quantum Electronics Vol. 3(3) 916 (1997)	
DV		R. H. Horng, D. S. Wu, S. C. Wei, M. F. Huang, K. H. Chang, P. H. Liu, and K. C. Lin, "AlGaInP/AuBe/glass light emitting diodes fabricated by wafer-bonding technology", Appl. Phys. Lett. Vol. 75(2) 154 (1999)	
DV		D. L. Huffaker, H. Deng, Q. Deng, and D. G. Deppe, "Ring and stripe oxide-confined vertical-cavity surface-emitting lasers", Appl. Phys. Lett., Vol. 69(23), 3477 (1996)	
DV		B. Koley, F. G. Johnson, O. King, S. S. Saini, and M. Dagenais, "A method of highly efficient hydrolyzation/oxidation of III-V semiconductor lattice matched to indium phosphide", Appl. Phys. Lett. Vol. 75(9) 1264 (1999)	
DV		M. Kondow, T. Kitatani, S. Nakatsuka, M. C. Larson, K. Nakahara, Y. Yazawa, M. Okai, and K. Uomi, "GaInNAs: A novel material for long-wavelength semiconductor lasers", IEEE Journal of Selected Topics in Quantum Electronics, Vol 3(3), 719 (1997)	

Examiner Signature	<i>[Signature]</i>	Date Considered	5/29/03
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¹ Applicant's unique citation designation number (optional). ² Applicant is to place a check mark here if English language Translation is attached.

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Substitute for form 1449B/PTO		Complete if Known			
INFORMATION DISCLOSURE STATEMENT BY APPLICANT (use as many sheets as necessary)		Application Number	10/037,966		
		Filing Date	12/21/2001		
		First Named Inventor	Painter		
		Group Art Unit	2874		
		Examiner Name	Daniel E Valencia		
Sheet	3	of	5	Attorney Docket Number	CQC14NP

OTHER PRIOR ART -- NON PATENT LITERATURE DOCUMENTS			
Examiner Initials ¹	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
DV		B.A. Little, S.T. Chu, H. A. Haus, J. Foresi, and J.-P. Laine, "Microring channel dropping filters", J. Lightwave Technology Vol. 15 998 (1997)	
DV		Y. Luo, D. C. Hall, L. Kou, L. Steingart, J. H. Jackson, O. Blum, and H. Hou, "Oxidized AlxGa1-xAs heterostructures planar waveguides", Appl. Phys. Lett. Vol. 75(20) 3078 (1999)	
DV		M. H. MacDougall, P. D. Dapkus, A. E. Bond, C.-K. Lin, and J. Geske, "Design and fabrication of VCSEL's with AlxOy-GaAs DBR's", IEEE Journal of Selected Topics in Quantum Electronics Vol. 3(3) 905 (1997)	
DV		M. H. MacDougall, P. D. Dapkus, "Wavelength shift of selectively oxidized AlxOy-AlGaAs-GaAs distributed Bragg reflectors", IEEE Photonics Tech. Lett. Vol. 9(7) 884 (1997)	
DV		R. L. Naone and L. A. Coldren, "Surface energy model for the thickness dependence of the lateral oxidation of AlAs", J. Appl. Phys. Vol. 82(5) 2277 (1997)	
DV		N. Ohnoki, F. Koyama, and K. Iga, "Superlattice AlAs/AlInAs-oxide current aperture for long wavelength InP-based vertical-cavity surface-emitting laser structure", Appl. Phys. Lett. Vol. 73(22) 3262 (1998)	
DV		N. Ohnoki, F. Koyama, and K. Iga, "Super-lattice AlAs/AlInAs for lateral-oxide current confinement in InP-based lasers", J. Crystal Growth Vol. 195 603 (1998)	
DV		R. D. Pechstedt, P. St. J. Russell, T. A. Birks, and F. D. Lloyd-Lucas, "Selective coupling of fiber modes with use of surface-guided Bloch modes supported by dielectric multilayer stacks", J. Opt. Soc. Am. A Vol. 12(12) 2655 (1995)	
DV		R. D. Pechstedt, P. St. J. Russell, "Narrow-band in-line fiber filter using surface-guided Bloch modes supported by dielectric multilayer stacks", J. Lightwave Tech. Vol. 14(6) 1541 (1996)	
DV		B. Pezeshki, J. A. Kash, D. W. Kisker, and F. Tong, "Multiple wavelength light source using an asymmetric waveguide coupler", Appl. Phys. Lett. Vol. 65(2) 138 (1994)	
DV		B. Pezeshki, J. A. Kash, D. W. Walker, and F. Tong, "Wavelength sensitive tapered coupler with anti-resonant waveguides", IEEE Phot. Tech. Lett. Vol. 6(10) 1225 (1994)	

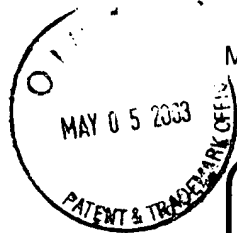
Examiner Signature	<i>D. Valencia</i>	Date Considered	5/30/03
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**INFORMATION DISCLOSURE
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Sheet

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Complete if Known

Application Number	10/037,966
Filing Date	12/21/2001
First Named Inventor	Painter
Group Art Unit	2874
Examiner Name	Daniel E Valencia
Attorney Docket Number	CQC14NP

OTHER PRIOR ART -- NON PATENT LITERATURE DOCUMENTS

Examiner Initials ¹	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published	T ²
DV		B. Pezeshki, F. F. Tong, J. A. Kash, and D. W. Kisker, "Vertical cavity devices as wavelength selective waveguides", J. Lightwave Tech. Vol. 12(10) 1791 (1994)	
DV		B. Pezeshki, J. A. Kash, and F. Agahi, "Waveguide version of an asymmetric Fabry-Perot modulator", Appl. Phys. Lett. Vol. 67(12) 1662 (1995)	
DV		H. Saito, T. Makimoto, and N. Kobayashi, "MOVPE growth of strained InGaAsN/GaAs quantum wells", J. Crystal Growth, Vol. 195 416 (1998)	
DV		I.-H. Tan, C. Reaves, A. L. Holmes Jr., E. L. Hu, J. E. Bowers, and S. DenBaars, "Low-temperature bonding of III-V semiconductors", Electronics Letters 31 588 (1995)	
DV		H. Wada and T. Kamijoh, "Effects of heat treatment on bonding properties in InP-to-Si direct wafer bonding", Japanese Journal of Applied Physics Part 1 33 4878 (1994)	
DV		H. Wada, T. Kamijoh, and Y. Ogawa, "Direct bonding of InP to different materials for optical devices", Proceedings of the 3rd International Symposium on Semiconductor Wafer Bonding Science, Technology, and Applications, 95-97 579, The Electrochemical Society (Pennington NJ, 1995)	
DV		H. Wada and T. Kamijoh, "Room-temperature cw operation of InGaAsP lasers on Si fabricated by wafer bonding", IEEE Photonics Technology Letters 8 173 (1996)	
DV		H. Wada and T. Kamijoh, "Wafer bonding of InP to Si and its application to optical devices", Japanese Journal of Applied Physics Part 1 37 1383 (1998)	
DV		Z. J. Wang, S.-J. Chua, F. Zhou, W. Wang, and R. H. Wu, "Buried heterostructures InGaAsP/InP strain-compensated multiple quantum well laser with a native-oxidized InAlAs current blocking layer", Appl. Phys. Lett. Vol 73(26) 3803 (1998)	

Examiner
Signature

Date

Considered

5/30/03

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¹ Applicant's unique citation designation number (optional). ² Applicant is to place a check mark here if English language Translation is attached.

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Substitute for form 1449B/PTO		Complete if Known	
INFORMATION DISCLOSURE STATEMENT BY APPLICANT (use as many sheets as necessary)		Application Number	10/037,966
		Filing Date	12/21/2001
		First Named Inventor	Painter
		Group Art Unit	2874
		Examiner Name	Daniel E Valencia
Sheet 5 of 5	Attorney Docket Number	CQC14NP	

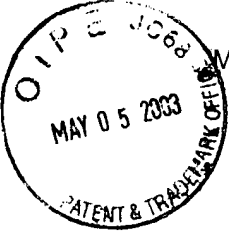
OTHER PRIOR ART -- NON PATENT LITERATURE DOCUMENTS			
Examiner Initials [*]	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
DV		H. P. Xin and C. W. Tu, "GaInNAs/GaAs multiple quantum wells grown by gas-source molecular beam epitaxy", Appl. Phys Lett. Vol. 72(19) 2442 (1998)	
DV		E. Yablonovitch, T. Sands, D. M. Hwang, I. Schnitzer, T. J. Gmitter, S. K. Shastry, D. S. Hill, and J. C. C. Fan, "Van der Waals bonding of GaAs on Pd leads to a permanent, solid-phase-topotaxial, metallurgical bond", Applied Physics Letters 59 3159 (1991)	
DV		Pochi Yeh, Amnon Yariv, and Chi-Shain Hong, "Electromagnetic propagation in periodic stratified media. I. General theory", J. Optical Soc. Am., Vol. 67(4) 423 (1977)	
DV		Z.-F. Xiao, G.-Y. Wu, D. Zhang, G. Zhang, Z.-H. Li, Y.-L. Hao, and Y.-Y. Wang, "Silicon/glass wafer-to-wafer bonding with Ti/Ni intermediate bonding", Sensors and Actuators A - Physical 71 123 (1998)	

Examiner Signature		Date Considered	5/30/03
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*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

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POWER OF ATTORNEY OR AUTHORIZATION OF AGENT

Application Number	10/037,966
Filing Date	12/21/2001
First Named Inventor	Painter
Title	MULTI-LAYER DISPERSION-ENGINEERED WAVEGUIDES AND RESONATORS
Group Art Unit	
Examiner Name	
Attorney Docket Number	CQC14NP

I hereby appoint:

☒ Practitioners at Customer Number

36394



OR

☐ Practitioner(s) named below:

Name	Registration Number

as my/our attorney(s) or agent(s) to prosecute the application identified above, and to transact all business in the United States Patent and Trademark Office connected therewith.

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I am the:

☐ Applicant/Inventor.

☒ Assignee of record of the entire interest. See 37 CFR 3.71.
Statement under 37 CFR 3.73(b) is enclosed. (Form PTO/SB/96).

SIGNATURE of Applicant or Assignee of Record

Name

Jeffrey S. Ritchner, President and CEO, Xponent Photonics Inc.

Signature

Date

NOTE: Signatures of all the inventors or assignees of record of the entire interest or their representative(s) are required. Submit multiple forms if more than one signature is required, see below.

☒ Total of 1 forms are submitted.

Burden Hour Statement: This form is estimated to take 3 minutes to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.

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STATEMENT UNDER 37 CFR 3.73(b)Applicant/Patent Owner: Xponent Photonics, Inc.Application No./Patent No.: 10/037,966 Filed/Issue Date: 12/21/2001Entitled: MULTI-LAYER DISPERSION-ENGINEERED WAVEGUIDES AND RESONATORSXponent Photonics, Inc., a corporation

(Name of Assignee)

(Type of Assignee, e.g., corporation, partnership, university, government agency, etc.)

states that it is:

1. ☒ the assignee of the entire right, title, and interest; or
2. ☐ an assignee of less than the entire right, title and interest.
The extent (by, percentage) of its ownership interest is _____ %

in the patent application/patent identified above by virtue of either:

- A. ☒ An assignment from the inventor(s) of the patent application/patent identified above. The assignment was recorded in the United States Patent and Trademark Office at Reel _____, Frame _____, or for which a copy thereof is attached.

OR

- B. ☐ A chain of title from the inventor(s), of the patent application/patent identified above, to the current assignee as shown below:

1. From: _____ To: _____

The document was recorded in the United States Patent and Trademark Office at
Reel _____, Frame _____, or for which a copy thereof is attached.

2. From: _____ To: _____

The document was recorded in the United States Patent and Trademark Office at
Reel _____, Frame _____, or for which a copy thereof is attached.

3. From: _____ To: _____

The document was recorded in the United States Patent and Trademark Office at
Reel _____, Frame _____, or for which a copy thereof is attached.☐ Additional documents in the chain of title are listed on a supplemental sheet.

- ☒ Copies of assignments or other documents in the chain of title are attached.

[NOTE: A separate copy (i.e., the original assignment document or a true copy of the original document) must be submitted to Assignment Division in accordance with 37 CFR Part 3, if the assignment is to be recorded in the records of the USPTO. See MPEP 302.08]

The undersigned (whose title is supplied below) is authorized to act on behalf of the assignee.

4-1-2003

Date

Jeffrey S. Rittichier

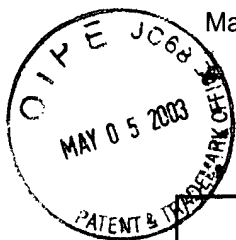
Typed or printed name

Signature

President and CEO, Xponent Photonics Inc.

Title

COPY



Sample Form (former PTO/SB/15) (05-01)

ASSIGNMENT OF APPLICATION

Docket Number (Optional)
CQC14NP

Whereas, I/We, Oskar J. Painter of Pasadena, CA, hereafter referred to as applicant, have invented certain new and useful improvements in Multi-layer dispersion-engineered waveguides and resonators

☒ for which an application for a United States Patent was filed on 12/21/2001

Application Number 10 / 037,966

☐ for which an application for a United States Patent was executed on _____ and _____

Whereas, Xponent Photonics Inc of Monrovia, CA herein referred to "assignee" whose mailing address is 425 East Huntington Drive, Monrovia, CA 91016 is

desirous of acquiring the entire right, title and interest in the same;

Now, therefore, in consideration of the sum of ten dollars (\$ 10), the receipt whereof is acknowledged, and other good and valuable consideration, I/We, the applicant(s), by these presents do sell, assign and transfer unto said assignee the full and exclusive right to the said invention in the United States and the entire right, title and interest in and to any and all Patents which may be granted therefor in the United States, I/We hereby authorize and request the Commissioner of Patent and Trademarks to issue said United States Patent to said assignee, of the entire right, title, and interest in and to the same, for his sole use and behoof; and for the use and behoof of his legal representatives, to the full end of the term for which said Patent may be granted, as fully and entirely as the same would have been held by me had this assignment and sale not been made.

Executed this 19TH day of MARCH, 2003
at Monrovia, California

State of CALIFORNIA

County of Los Angeles

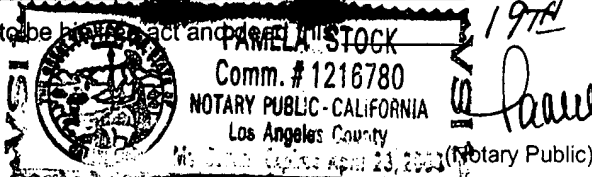
SS:

Before me personally appeared said OSKAR PAINTER

and acknowledged the foregoing instrument to be his act and deed.

day of MARCH, 2003

Seal

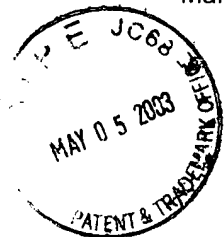


Note: Signatures of all the inventors or assignees of record of the entire interest or their representative(s) are required. Submit multiple forms if more than one signature is required. See below.

* ☒ Total of 3 forms are submitted.

This form offers a sample or suggested format for an assignment document. This sample form is not an OMB officially approved form.

COPY



Sample Form (former PTO/SB/15) (05-01)

ASSIGNMENT OF APPLICATIONDocket Number (Optional)
CQC14NP

Whereas, I/We, Kerry J. Vahala of San Gabriel, CA, hereafter referred to as applicant, have invented certain new and useful improvements in Multi-layer dispersion-engineered waveguides and resonators

☒ for which an application for a United States Patent was filed on 12/21/2001

Application Number 10 / 037,966

☐ for which an application for a United States Patent was executed on _____, and

Whereas, Xponent Photonics Inc of Monrovia, CA herein referred to "assignee" whose mailing address is 425 East Huntington Drive, Monrovia, CA 91016 is

desirous of acquiring the entire right, title and interest in the same;

Now, therefore, in consideration of the sum of ten dollars (\$ 10), the receipt whereof is acknowledged, and other good and valuable consideration, I/We, the applicant(s), by these presents do sell, assign and transfer unto said assignee the full and exclusive right to the said invention in the United States and the entire right, title and interest in and to any and all Patents which may be granted therefor in the United States, I/We hereby authorize and request the Commissioner of Patent and Trademarks to issue said United States Patent to said assignee, of the entire right, title, and interest in and to the same, for his sole use and behoof; and for the use and behoof of his legal representatives, to the full end of the term for which said Patent may be granted, as fully and entirely as the same would have been held by me had this assignment and sale not been made.

Executed this 21ST day of MARCH, 2003
at MONROVIA, CALIFORNIA

State of CALIFORNIA

County of Los Angeles

SS:

Before me personally appeared said KERRY VAHALA

and acknowledged the foregoing instrument to be his free act and deed this 21ST
day of MARCH, 2003

Seal



PAMELA STOCK
Comm. # 1216780
NOTARY PUBLIC-CALIFORNIA
Los Angeles County

(Notary Public)

Note: Signatures of all the inventors or assignees of record of the entire instrument (and their legal representatives) are required. Submit multiple forms if more than one signature is required. See below.

* ☒ Total of 3 forms are submitted.

This form offers a sample or suggested format for an assignment document. This sample form is not an OMB officially approved form.

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Mail Label EU715559594US

Sample Form (former PTO/SB/15) (05-01)

ASSIGNMENT OF APPLICATION

Docket Number (Optional)
CQC14NP

Whereas, I/We, David W. Vernoooy of Sierra Madre, CA, hereafter referred to as applicant, have invented certain new and useful improvements in Multi-layer dispersion-engineered waveguides and resonators

☒ for which an application for a United States Patent was filed on 12/21/2001

Application Number 10 / 037,966

☐ for which an application for a United States Patent was executed on _____, and

Whereas, Xponent Photonics Inc of Monrovia, CA herein referred to "assignee" whose mailing address is 425 East Huntington Drive, Monrovia, CA 91016 is

desirous of acquiring the entire right, title and interest in the same;

Now, therefore, in consideration of the sum of ten dollars (\$ 10), the receipt whereof is acknowledged, and other good and valuable consideration, I/We, the applicant(s), by these presents do sell, assign and transfer unto said assignee the full and exclusive right to the said invention in the United States and the entire right, title and interest in and to any and all Patents which may be granted therefor in the United States, I/We hereby authorize and request the Commissioner of Patent and Trademarks to issue said United States Patent to said assignee, of the entire right, title, and interest in and to the same, for his sole use and behoof; and for the use and behoof of his legal representatives, to the full end of the term for which said Patent may be granted, as fully and entirely as the same would have been held by me had this assignment and sale not been made.

Executed this 17TH day of MARCH, 2003
at MONROVIA, CALIFORNIA

State of CALIFORNIA
County of LOS ANGELES

SS:

Before me personally appeared said DAVID VERNOOY

and acknowledged the foregoing instrument to be his free act and deed this 17TH

day of MARCH, 2003.

Seal



PAMELA STOCK
Comm. # 1216780
NOTARY PUBLIC - CALIFORNIA
Los Angeles County (Notary Public)

Note: Signatures of all the inventors or assignees of record of the entire interest in the invention are required. Submit multiple forms if more than one signature is required. See below.

* ☒ Total of 3 forms are submitted.

This form offers a sample or suggested format for an assignment document. This sample form is not an OMB officially approved form.

* COPY *